J1800I-C/BR

Motherboard

E8844
First Edition
February 2014

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Safety information

Electrical safety

- To prevent electrical shock hazard, disconnect the power cable from the electrical outlet before relocating the system.
- When adding or removing devices to or from the system, ensure that the power cables for the devices are unplugged before the signal cables are connected. If possible, disconnect all power cables from the existing system before you add a device.
- Before connecting or removing signal cables from the motherboard, ensure that all power cables are unplugged.
- Seek professional assistance before using an adapter or extension cord. These devices could interrupt the grounding circuit.
- Ensure that your power supply is set to the correct voltage in your area. If you are not sure about the voltage of the electrical outlet you are using, contact your local power company.
- If the power supply is broken, do not try to fix it by yourself. Contact a qualified service technician or your retailer.

Operation safety

- Before installing the motherboard and adding devices on it, carefully read all the manuals that came with the package.
- Before using the product, ensure all cables are correctly connected and the power cables are not damaged. If you detect any damage, contact your dealer immediately.
- To avoid short circuits, keep paper clips, screws, and staples away from connectors, slots, sockets and circuitry.
- Avoid dust, humidity, and temperature extremes. Do not place the product in any area where it may become wet.
- Place the product on a stable surface.
- If you encounter technical problems with the product, contact a qualified service technician or your retailer.

About this guide

This user guide contains the information you need when installing and configuring the motherboard.

How this guide is organized

This guide contains the following parts:

- **Chapter 1: Product introduction**

  This chapter describes the features of the motherboard and the new technology it supports.

- **Chapter 2: BIOS information**

  This chapter tells how to change system settings through the BIOS Setup menus. Detailed descriptions of the BIOS parameters are also provided.

Where to find more information

Refer to the following sources for additional information and for product and software updates.

1. **ASUS websites**

   The ASUS website provides updated information on ASUS hardware and software products. Refer to the ASUS contact information.

2. **Optional documentation**

   Your product package may include optional documentation, such as warranty flyers, that may have been added by your dealer. These documents are not part of the standard package.

Conventions used in this guide

To ensure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

DANGER/WARNING: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task

IMPORTANT: Instructions that you MUST follow to complete a task..

NOTE: Tips and additional information to help you complete a task.

Typography

Bold text	Indicates a menu or an item to select.
Italics	Used to emphasize a word or a phrase.
<Key>	Keys enclosed in the less-than and greater-than sign means that you must press the enclosed key. Example: <Enter> means that you must press the Enter or Return key.
<Key1> + <Key2> + <Key3>	If you must press two or more keys simultaneously, the key names are linked with a plus sign (+).

Package contents

Check your motherboard package for the following items.

Motherboard	ASUS J1800I-C/BR motherboard
Cables	2 x Serial ATA 3.0 Gb/s cables
Accessories	1 x I/O Shields
Application DVD	Support DVD
Documentation	User Guide

If any of the above items is damaged or missing, contact your retailer.

J1800I-C/BR specifications summary

CPU	Intel® Celeron® Dual-core Processor J1800
Memory	2 x SO-DIMM DDR3L 1333 MHz, Max 8GB, non-ECC, un-buffered memory Dual-channel memory architecture *** Hyper DIMM support is subject to the physical characteristics of individual CPUs. Please refer to Memory QVL for details.** **** Refer to www.asus.com for the latest Memory QVL (Qualified Vendors List).**
Graphics	Integrated Graphics Processor- Intel® HD Graphics support Multi-VGA output support: HDMI, D-Sub port - Supports HDMI with max. resolution of 1920x1080@60Hz - Supports D-sub with max. resolution of 2560x1600@60Hz - Maximum shared memory of 512MB *** With DX11, OpenCL 1.1, OpenGL 4.0 ES Halt/2.0/1.1, OGL 3.2 support** **** Support H.264, MPEG2, MVC, VC-1, WMV9 and VP8 decode acceleration**
Expansion slots	1 x PCI Express x1 slot 1 x Mini PCI Express slot
Storage	2 x SATA 3.0Gb/s connectors
LAN	Realtek® 8111G PCIe Gigabit LAN controller
Audio	Realtek® ALC887 8-channel High Definition Audio CODEC - Supports Jack-Detection, and Front Panel Jack-Retasking • **Use a chassis with HD audio module in the front panel to support an 8-channel audio output.**
USB	1 x USB 3.0/2.0 ports at back panel (blue) 6 x USB 2.0/1.0 ports (2 at mid-board, 4 at back panel)
ASUS Unique Features	**ASUS Exclusive Features** - ASUS Anti-surge Protection - ASUS AI Suite 3 - ASUS USB 3.0 Boost - ASUS Network iControl **ASUS Quiet Thermal Solution** - ASUS Fan Xpert

(continued on the next page)

J1800I-C/BR specifications summary

ASUS Unique Features	**ASUS EZ DIY** - ASUS UEFI BIOS - ASUS MyLogo 2 - ASUS EZ-FLash 2 - ASUS Crash Free BIOS3 **100% All High-quality Conductive Polymer Capacitors**
Back Panel I/O Ports	1 x PS/2 mouse/keyboard combo port 1 x HDMI port 1 x D-Sub port 1 x COM port 1 x USB 3.0/2.0 ports 4 x USB 2.0/1.1 ports 1 x Gigabit LAN (RJ-45) port 3 x Audio jacks support 8-channel audio output
Internal I/O Connectors	1 x USB 2.0/1.1 connectors support additional 2 USB 2.0/1.1 ports 2 x SATA 3.0Gb/s connectors 1 x Chassis fan connector 1 x CPU fan connector 1 x Front panel audio connector 1 x COM connector 1 x LPT connector 1 x TPM connector 1 x 24-pin EATX power connector 1 x 4-pin EATX 12V power connector 1 x Buzzer 1 x System panel connector
BIOS features	64Mb Flash ROM, UEFI AMI BIOS, PnP, DMI2.0, WfM2.0,SM BIOS 2.7, ACPI 2.0a, Multi-language BIOS, ASUS EZ Flash 2, ASUS CrashFree BIOS 3, My Favorites, Quick Note, Last Modified log, F12 PrintScreen, F3 Shortcut functions and ASUS DRAM SPD (Serial Presence Detect) memory information
Manageability	Wfm 2.0, DMI 2.0, WOL by PME, PXE
Support DVD	Drivers ASUS utilities EZ Update Anti-virus software (OEM version)
Form factor	Mini ITX Form Factor, 6.7” x 6.7” (17cm x 17cm)

Specifications are subject to change without notice.

Product introduction

1

1.1 Before you proceed

Take note of the following precautions before you install motherboard components or change any motherboard settings.

- Unplug the power cord from the wall socket before touching any component.
- Before handling components, use a grounded wrist strap or touch a safely grounded object or a metal object, such as the power supply case, to avoid damaging them due to static electricity.
- Hold components by the edges to avoid touching the ICs on them.
- Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that came with the component.
- Before you install or remove any component, ensure that the ATX power supply is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, or components.

1.2 Motherboard overview

Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

Ensure that you unplug the power cord before installing or removing the motherboard. Failure to do so can cause you physical injury and damage motherboard components.

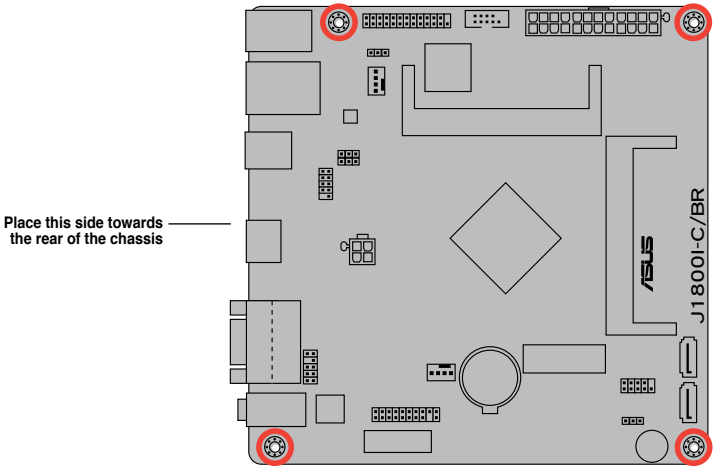
1.2.1 Placement direction

When installing the motherboard, ensure that you place it into the chassis in the correct orientation. The edge with external ports goes to the rear part of the chassis as indicated in the image below.

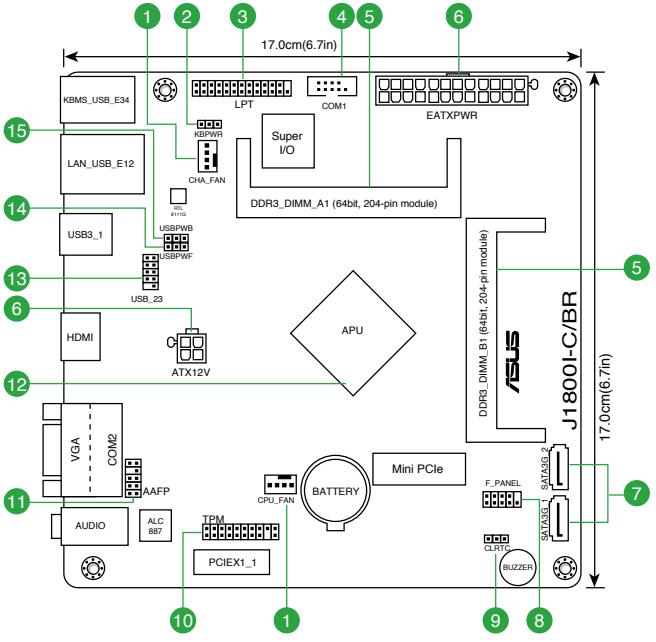
1.2.2 Screw holes

Place four screws into the holes indicated by circles to secure the motherboard to the chassis.

Do not overtighten the screws! Doing so can damage the motherboard.



1.2.3 Motherboard layout



1.2.4 Layout contents

Connectors/Jumpers/Slots/LED		Page
1.	CPU and chassis fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN)	1-13
2.	Keyboard power (3-pin KBWR)	1-8
3.	LPT connector (26-1 pin LPT)	1-12
4.	COM port connector (10-1 pin COM1)	1-11
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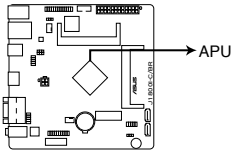
15.	USB device wake-up (3-pin USBPWB)	1-8

1.3 Central Processing Unit (CPU)

The motherboard comes with an onboard Intel® Celeron™ Dual-core Processor J1800 and a specially designed CPU heatsink.

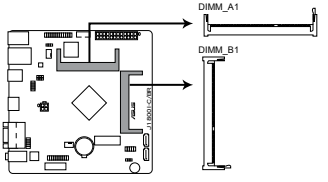


J1800I-C/BR APU

1.4 System memory

1.4.1 Overview

This motherboard comes with two Double Data Rate 3 (DDR3) Small Outline Dual Inline Memory Modules (SO-DIMM) sockets. The figure illustrates the location of the DDR3 DIMM sockets:



J1800I-C/BR 204-pin DDR3 SO-DIMM sockets

Channel	Sockets
Channel A	DIMM_A1
Channel B	DIMM_B1

- Using both memory channels is supported on this motherboard. When installing 2 SO-DIMMs, use the same size and type of memory. The DIMM_A1 slot should be filled in order for the motherboard to work properly.
- This model supports a maximum total memory of of 8GB DDR3 1333 only. Memory modules with a voltage higher than 1.35V will run at 1.35V. DDR3 1066Mhz memory modules are not supported.

1.4.2 Memory configurations

You may install 1GB, 2GB, 4GB and 8GB unbuffered non-ECC DDR3 SO-DIMMs into the DIMM sockets.

- Always install DIMMs with the same CAS latency. For optimum compatibility, it is recommended that you obtain memory modules from the same vendor.
- This motherboard does not support DIMMs made up of 256 megabits (Mb) chips or less.

J1800I-C/BR Series Motherboard Qualified Vendors Lists (QVL)

DDR3-1333 MHz capability

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMMs
CRUCIAL	CT102464BF1339.C16FER	8GB	DS	CRUCIAL	CT512X8-1339	-	1.35V		
G.SKILL	F3-1333C9D-8GSL	4GB	DS	-	K4B2G0846C	9-9-9-24	1.35V		•
GEIL	GGS38GB1333C9DC	4GB	DS	HYNIX	H5TQ2G83CFR	9-9-9-24	1.3V		•

DDR3-1600 MHz capability

Vendors	Part No.	Size	SS/DS	Chip Brand	Chip NO.	Timing	Voltage	DIMM socket support (Optional)	
								1 DIMM	2 DIMMs
KINGSTON	KVR16LS11/4	4GB	DS	NANYA	NT5CC512M8CN-DI	-	1.35V		•
SAMSUNG	M473B5773DHO-YKO 1251	2GB	DS	-	GEHXB8A3C	-	1.35V		•
SAMSUNG	M471B5273EBO-CKO 1231	4GB	DS	-	SEC231BCKDK4B2GO846E	-	1.35V		•
TRANSCEND	TS512MSK64W6H	4GB	DS	-	K4B4G0846B	-	1.35V		•
TRANSCEND	TS1GSK64W6H	8GB	DS	-	K4B4G0846B	-	1.35V		
ADATA	ADDS1600W4G11-B	4GB	DS	ADATA	QWND-1211AEL1329V	-	1.35V		•
ADATA	ADDS1600W8G11-B	8GB	DS	ADATA	QWND-1211AEL1329V	-	1.35V		
PQI	MFCDR521UA0101	4GB	DS	PQI	PQD312O8D12R	-	1.35V		•
PQI	MFCDR621UA0103	8GB	DS	PQI	PQD312O8D12R	-	1.35V		

SS: Single-sided / DS: Double-sided

DIMM support:

- **A*:** Supports one module inserted into either slot.
- **B*:** Supports one pair of modules inserted into both the slots.

- Using both memory channels is supported on this motherboard. When installing 2 SO-DIMMs, use the same size and type of memory. The DIMM_A1 slot should be filled in order for the motherboard to work properly.
- Memory modules with a voltage higher than 1.35V will run at 1.35V.
- When installing memory with frequency higher than 1333Mhz, the motherboard will automatically run the memory at 1333Mhz. DDR3 1066Mhz memory modules are not supported.

Visit the ASUS website at www.asus.com for the latest QVL.

1.5 Expansion slots

In the future, you may need to install expansion cards. The following sub-sections describe the slots and the expansion cards that they support.

Unplug the power cord before adding or removing expansion cards. Failure to do so may cause you physical injury and damage motherboard components.

1.5.1 Installing an expansion card

To install an expansion card:

1. Before installing the expansion card, read the documentation that came with it and make the necessary hardware settings for the card.
2. Remove the system unit cover (if your motherboard is already installed in a chassis).
3. Remove the bracket opposite the slot that you intend to use. Keep the screw for later use.
4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
5. Secure the card to the chassis with the screw you removed earlier.
6. Replace the system cover.

1.5.2 Configuring an expansion card

After installing the expansion card, configure it by adjusting the software settings.

1. Turn on the system and change the necessary BIOS settings, if any. See Chapter 2 for information on BIOS setup.
2. Assign an IRQ to the card.
3. Install the software drivers for the expansion card.

1.5.3 PCI Express 2.0 x1 slot

This motherboard supports PCI Express 2.0 x1 network cards, SCSI cards, and other cards that comply with the PCI Express specifications.

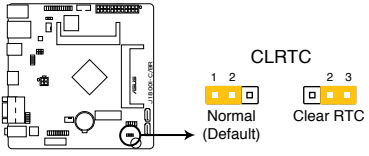
IRQ assignments for this motherboard

Component	A	B	C	D	E	F	G	H
SATA Controller	–	–	–	shared	–	–	–	–
HD Audio	–	–	–	–	–	–	shared	–
USB 3.0	–	–	–	–	shared	–	–	–
USB 2.0	–	–	–	–	–	–	–	shared
LAN	–	shared	–	–	–	–	–	–
PCIE x1_1	–	–	shared	–	–	–	–	–
WLAN	–	–	–	shared	–	–	–	–

1.6 Jumpers

1. **Clear RTC RAM (3-pin CLRTC)**

This jumper allows you to clear the Real Time Clock (RTC) RAM in CMOS. You can clear the CMOS memory of date, time, and system setup parameters by erasing the CMOS RTC RAM data. The onboard button cell battery powers the RAM data in CMOS, which include system setup information such as system passwords.



J1800I-C/BR Clear RTC RAM

To erase the RTC RAM:

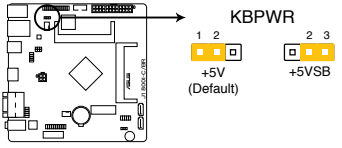
1. Turn OFF the computer and unplug the power cord.
2. Move the jumper cap from pins 1-2 (default) to pins 2-3. Keep the cap on pins 2-3 for about 5-10 seconds, then move the cap back to pins 1-2.
3. Plug the power cord and turn ON the computer.
4. Hold down the <**Del**> key during the boot process and enter BIOS setup to re-enter data.

Except when clearing the RTC RAM, never remove the cap on CLRTC jumper default position. Removing the cap will cause system boot failure!

- If the steps above do not help, remove the onboard battery and move the jumper again to clear the CMOS RTC RAM data. After clearing the CMOS, reinstall the battery.
- You do not need to clear the RTC when the system hangs due to overclocking. For system failure due to overclocking, use the CPU Parameter Recall (C.P.R.) feature. Shut down and reboot the system, then the BIOS automatically resets parameter settings to default values.

2. **Keyboard power (3-pin KBPWR)**

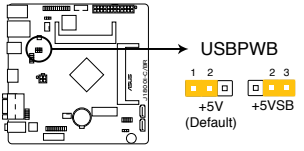
This jumper allows you to enable or disable the keyboard wake-up feature. When you set this jumper to pins 2–3 (+5VSB), you can wake up the computer by pressing a key on the keyboard. This feature requires an ATX power supply that can supply at least 1A on the +5VSB lead, and a corresponding setting in the BIOS.



J1800I-C/BR Keyboard power setting

3. **USB device wake-up (3-pin USBPWB)**

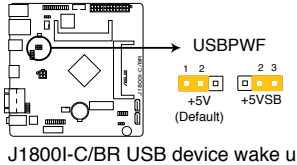
Set this jumper to +5V to wake up the computer from S1 sleep mode (CPU stopped, DRAM refreshed, system running in low power mode) using the connected USB devices. Set to +5VSB to wake up from S3 and S4 sleep modes (no power to CPU, DRAM in slow refresh, power supply in reduced power mode).



J1800I-C/BR USB device wake up

4. **USB device wake-up (3-pin USBPWF)**

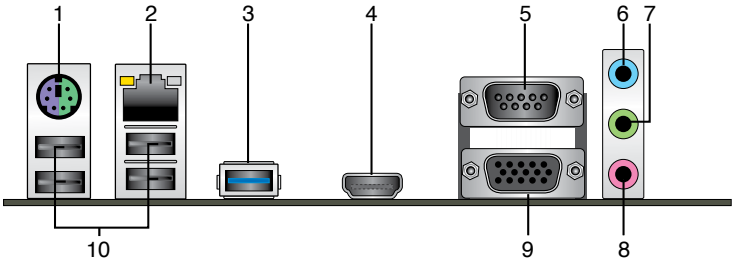
Set this jumper to +5V to wake up the computer from S1 sleep mode (CPU stopped, DRAM refreshed, system running in low power mode) using the connected USB devices. Set to +5VSB to wake up from S3 and S4 sleep modes (no power to CPU, DRAM in slow refresh, power supply in reduced power mode).



J1800I-C/BR USB device wake up

1.7 Connectors

1.7.1 Rear panel connectors

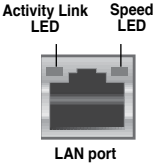


1. **PS/2 Keyboard / Mouse Combo port.** This port is for a PS/2 keyboard or mouse.

2. **LAN (RJ-45) port.** This port allows Gigabit connection to a Local Area Network (LAN) through a network hub. Refer to the table below for the LAN port LED indications.

LAN port LED indications

Activity/Link LED		Speed LED	
Status	Description	Status	Description
OFF	No link	OFF	10Mbps connection
ORANGE	Linked	ORANGE	100Mbps connection
BLINKING	Data activity	GREEN	1Gbps connection



3. **USB 3.0 port.** This 9-pin Universal Serial Bus (USB) ports is available for connecting USB 3.0 devices.

- DO NOT connect a keyboard / mouse to any USB 3.0 port when installing a Windows® operating system.
- Due to USB 3.0 controller limitations, USB 3.0 devices can only be used under a Windows® OS environment after installing the USB 3.0 driver.
- USB 3.0 devices can be used for data storage only.
- We strongly recommend that you connect USB 3.0 devices to USB 3.0 ports for a faster and better performance from your USB 3.0 devices.

4. **HDMI port.** This port is for a High-Definition Multimedia Interface (HDMI) connector, and is HDCP compliant allowing playback of HD DVD, Blu-Ray, and other protected content.

5. **Serial port (COM2).** This port connects a modem, or other devices that conform with serial specification.

6. **Line In port (light blue).** This port connects to a tape, CD, DVD player, or other audio source.

7. **Line Out port (lime).** This port connects to a headphone or a speaker. In the 4.1, 5.1, and 7.1-channel configurations, the function of this port becomes Front Speaker Out.

8. **Microphone port (pink).** This port connects to a microphone.

Refer to the audio configuration table for the function of the audio ports in a 2.1, 4.1, 5.1 or 7.1-channel configuration.

Audio 2.1, 4.1, 5.1 or 7.1-channel configuration

Port	Headset 2.1-channel	4.1-channel	5.1-channel	7.1-channel
Light Blue (Rear panel)	Line In	Rear Speaker Out	Rear Speaker Out	Rear Speaker Out
Lime (Rear panel)	Line Out	Front Speaker Out	Front Speaker Out	Front Speaker Out
Pink (Rear panel)	Mic In	Mic In	Bass/Center	Bass/Center
Lime (Front panel)	—	—	—	Side Speaker Out

To configure an 8-channel audio output:

Use a chassis with HD audio module in the front panel to support an 8-channel audio output.

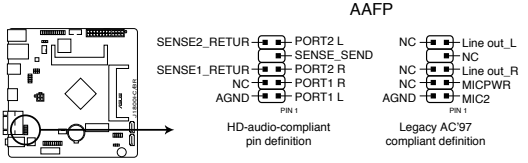
9. **Video Graphics Adapter (VGA) port.** This 15-pin port is for a VGA monitor or other VGA-compatible devices

10. **USB 2.0 ports 1~4.** These four 4-pin Universal Serial Bus (USB) ports are for USB 2.0/1.1 devices.

1.7.2 Internal connectors

1. **Front panel audio connector (10-1 pin AAFP)**

This connector is for a chassis-mounted front panel audio I/O module that supports either HD Audio or legacy AC`97 audio standard. Connect one end of the front panel audio I/O module cable to this connector.

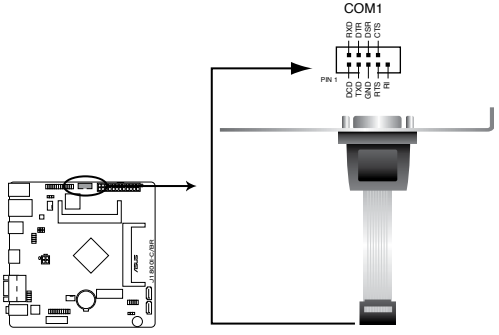


J1800I-C/BR Front panel audio connector

- We recommend that you connect a high-definition front panel audio module to this connector to avail of the motherboard's high-definition audio capability.
- If you want to connect a high-definition front panel audio module to this connector, set the **Front Panel Type** item in the BIOS setup to **[HD]**. If you want to connect an AC'97 front panel audio module to this connector, set the item to **[AC97]**. By default, this connector is set to **[HD]**. See section **2.5.6 Onboard Devices Configuration** for details.

2. **Serial port connector (10-1 pin COM1)**

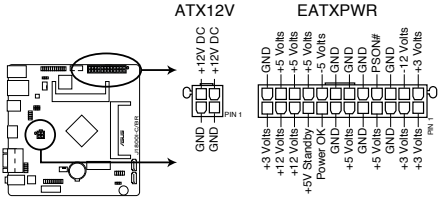
This connector is for a serial (COM) port. Connect the serial port module cable to this connector, then install the module to a slot opening at the back of the system chassis.



J1800I-C/BR Serial port connectors

3. **ATX power connectors (24-pin EATXPWR, 4-pin ATX12V)**

These connectors are for ATX power supply plugs. The power supply plugs are designed to fit these connectors in only one orientation. Find the proper orientation and push down firmly until the connectors completely fit.

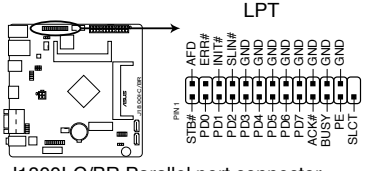


J1800I-C/BR ATX power connectors

- For a fully configured system, we recommend that you use a power supply unit (PSU) that complies with ATX 12 V Specification 2.0 (or later version) and provides a minimum power of 350 W.
- DO NOT forget to connect the 4-pin ATX +12V power plug. Otherwise, the system will not boot up.
- We recommend that you use a PSU with higher power output when configuring a system with more power-consuming devices. The system may become unstable or may not boot up if the power is inadequate.
- If you are uncertain about the minimum power supply requirement for your system, refer to the Recommended Power Supply Wattage Calculator at http://support.asus.com/PowerSupplyCalculator/PSCalculator.aspx?SLanguage=en-us for details.

4. **LPT connector (26-1 pin LPT)**

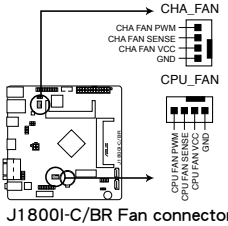
The LPT (Line Printing Terminal) connector supports devices such as a printer. LPT is standardized as IEEE 1284, which is the parallel port interface on IBM PC-compatible computers.



J1800I-C/BR Parallel port connector

5. **CPU and chassis fan connectors (4-pin CPU_FAN, 4-pin CHA_FAN)**

Connect the fan cables to the fan connectors on the motherboard, ensuring that the black wire of each cable matches the ground pin of the connector.

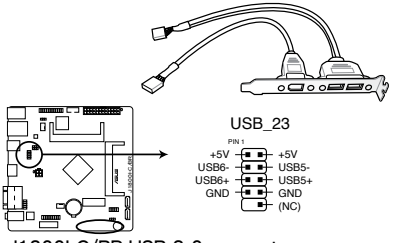


J1800I-C/BR Fan connectors

Do not forget to connect the fan cables to the fan connectors. Insufficient air flow inside the system may damage the motherboard components. These are not jumpers! Do not place jumper caps on the fan connectors!

6. **USB 2.0 connector (10-1 pin USB_23)**

This connector is for USB 2.0 ports. Connect the USB module cable to this connector, then install the module to a slot opening at the back of the system chassis. This USB connector complies with USB 2.0 specification that supports up to 480 Mbps connection speed.



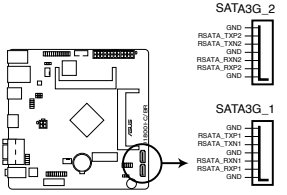
J1800I-C/BR USB 2.0 connectors

Never connect a 1394 cable to the USB connector. Doing so will damage the motherboard!

The USB module cable is purchased separately.

7. **Serial ATA 3.0Gb/s connectors (7-pin SATA3G_1/2)**

These connectors connect to Serial ATA 3.0 Gb/s hard disk drive or optical drive via Serial ATA 3.0 Gb/s signal cables.

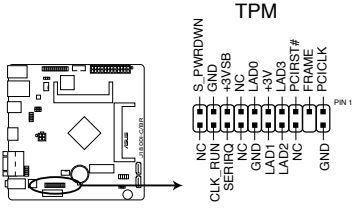


J1800I-C/BR SATA 3.0Gb/s connectors

- You must install Windows® XP Service Pack 3 or later version before using Serial ATA hard disk drives.
- To configure the default SATA type in BIOS, click **Advanced Mode** > **Advanced** tab > **SATA Configuration** > **SATA Mode**.
- When using hot-plug and NCQ, set the **SATA Mode** item in the BIOS to [AHCI Mode]. See section **2.5.3 SATA Configuration** for details.

8. **TPM connector (20-1 pin TPM)**

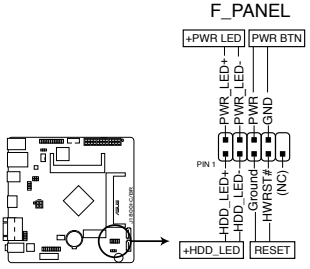
This connector supports a Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords and data. A TPM system also helps enhance network security, protects digital identities, and ensures platform integrity.



J1800I-C/BR TPM connector

9. **System panel connector (10-1 pin F_PANEL)**

This connector supports several chassis-mounted functions.



J1800I-C/BR System panel connector

- **System power LED (2-pin PWRLED)**

  This 2-pin connector is for the system power LED. Connect the chassis power LED cable to this connector. The system power LED lights up when you turn on the system power, and blinks when the system is in sleep mode.

- **Hard disk drive activity LED (2-pin +HDLED)**

  This 2-pin connector is for the HDD Activity LED. Connect the HDD Activity LED cable to this connector. The HD LED lights up or flashes when data is read from or written to the HDD.

- **ATX power button/soft-off button (2-pin PWRBTN)**

  This connector is for the system power button.

- **Reset button (2-pin RESET)**

  This 2-pin connector is for the chassis-mounted reset button for system reboot without turning off the system power.

1.8 Software support

1.8.1 Installing an operating system

This motherboard supports Windows® 8 64-bit and Windows® 8.1 64-bit only. Always install the latest OS version and corresponding updates to maximize the features of your hardware.

Motherboard settings and hardware options vary. Refer to your OS documentation for detailed information.

1.8.2 Support DVD information

The Support DVD that comes with the motherboard package contains the drivers, software applications, and utilities that you can install to avail all motherboard features.

The contents of the Support DVD are subject to change at any time without notice. Visit the ASUS website at www.asus.com for updates.

To run the Support DVD

Place the Support DVD into the optical drive. If Autorun is enabled in your computer, the DVD automatically displays the Specials screen which contains the unique features of ASUS motherboard. Click Drivers, Utilities, Manual, and Contact tabs to display their respective menus.

The following screen is for reference only.

If Autorun is NOT enabled in your computer, browse the contents of the Support DVD to locate the file ASSETUP.EXE from the BIN folder. Double-click the ASSETUP.EXE to run the DVD.

BIOS information

2

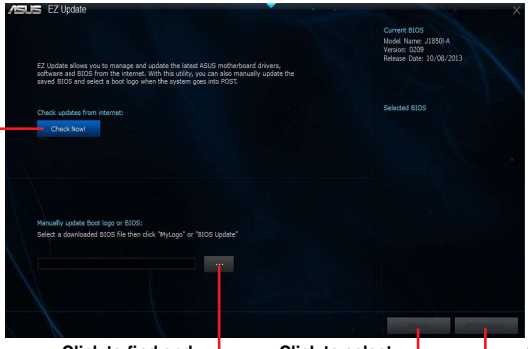
2.1 Managing and updating your BIOS

Save a copy of the original motherboard BIOS file to a USB flash disk in case you need to restore the BIOS in the future. Copy the original motherboard BIOS using the ASUS Update utility.

2.1.1 EZ Update

EZ Update is a utility that allows you to automatically update your motherboard's softwares, drivers and the BIOS version easily. With this utlity, you can also manually update the saved BIOS and select a boot logo when the system goes into POST.

To launch EZ Update, click **EZ Update** on the AI Suite 3 main menu bar.



Click to automatically update your motherboard's driver, software and firmware

Click to find and select the BIOS from file

Click to select a boot logo

Click to update the BIOS

EZ Update requires an Internet connection either through a network or an ISP (Internet Service Provider).

2.1.2 ASUS EZ Flash 2

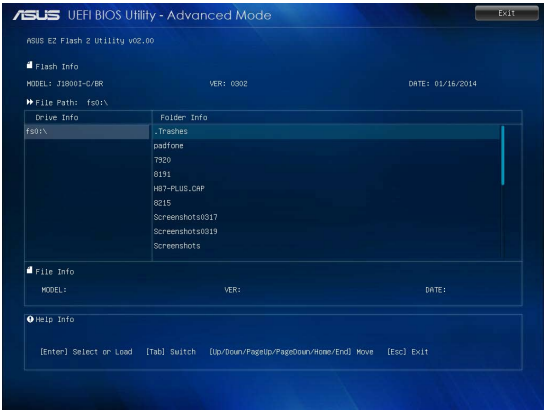
The ASUS EZ Flash 2 feature allows you to update the BIOS without using an OS-based utility.

Before you start using this utility, download the latest BIOS file from the ASUS website at www.asus.com.

To update the BIOS using EZ Flash 2:

1. Insert the USB flash disk that contains the latest BIOS file to the USB port.
2. Enter the **Advanced Mode** of the BIOS setup program. Go to the **Tool** menu to select **ASUS EZ Flash 2 Utility** and press <Enter> to enable it.
3. Press <Tab> to switch to the **Drive** field.
4. Press the Up/Down arrow keys to find the USB flash disk that contains the latest BIOS, and then press <Enter>.
5. Press <Tab> to switch to the **Folder Info** field.
6. Press the Up/Down arrow keys to find the BIOS file, and then press <Enter> to perform the BIOS update process. Reboot the system when the update process is done.

- This function supports USB flash disks formatted using FAT32/16 on a single partition only.
- Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. .
- DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!



Reboot the system after updating the BIOS using EZ Flash 2 to ensure that the USB 3.0 ports work properly.

2.1.3 ASUS CrashFree BIOS 3 utility

The ASUS CrashFree BIOS 3 is an auto recovery tool that allows you to restore the BIOS file when it fails or gets corrupted during the updating process. You can restore a corrupted BIOS file using the motherboard support DVD or a USB flash drive that contains the updated BIOS file.

- Before using this utility, rename the BIOS file in the removable device into **J1800ICB.CAP**.
- The BIOS file in the support DVD may not be the latest version. Download the latest BIOS file from the ASUS website at www.asus.com.

Recovering the BIOS

To recover the BIOS:

1. Turn on the system.
2. Insert the support DVD to the optical drive or the USB flash drive that contains the BIOS file to the USB port.
3. The utility automatically checks the devices for the BIOS file. When found, the utility reads the BIOS file and enters ASUS EZ Flash 2 utility automatically.
4. The system requires you to enter BIOS Setup to recover BIOS settings. To ensure system compatibility and stability, we recommend that you press <F5> to load default BIOS values.

DO NOT shut down or reset the system while updating the BIOS! Doing so can cause system boot failure!

2.1.4 ASUS BIOS Updater

The ASUS BIOS Updater allows you to update BIOS in a DOS environment. This utility also allows you to copy the current BIOS file that you can use as a backup when the BIOS fails or gets corrupted during the updating process.

The succeeding utility screens are for reference only. The actual utility screen displays may not be same as shown.

Before updating BIOS

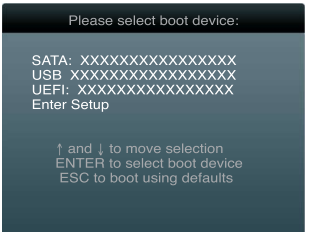
1. Prepare the motherboard support DVD and a USB flash drive formatted using FAT32/16 on a single partition.
2. Download the latest BIOS file and BIOS Updater from the ASUS website at **http://support.asus.com** and save them on the USB flash drive.

NTFS is not supported under DOS environment. Do not save the BIOS file and BIOS Updater to a hard disk drive or USB flash drive in NTFS format.

3. Turn off the computer and disconnect all SATA hard disk drives (optional).

Booting the system to a DOS environment

1. Insert the DOS-bootable USB flash drive with the latest BIOS file and BIOS Updater to your computer's USB port.
2. Boot your computer. When the ASUS Logo appears, press <F8> to show the **BIOS Boot Device Select Menu**.



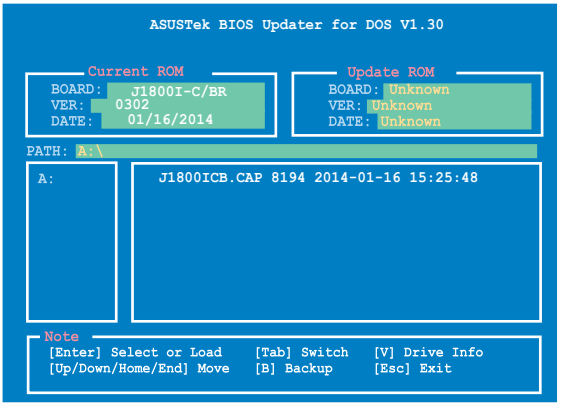
3. Select the USB flash drive as the boot device. The DOS screen appears.

Updating the BIOS file

To update the BIOS file using BIOS Updater:

1. At the FreeDOS prompt, type **bupdater /pc /g** and press <Enter>.

2. The BIOS Updater screen appears as below.



3. Press <Tab> to switch between screen fields and use the <Up/Down/Home/End> keys to select the BIOS file and press <Enter>. BIOS Updater checks the selected BIOS file and prompts you to confirm BIOS update.

4. Select Yes and press <Enter>. When BIOS update is done, press <ESC> to exit BIOS Updater. Restart your computer.

DO NOT shut down or reset the system while updating the BIOS to prevent system boot failure!

- For BIOS Updater version 1.30 or later, the utility automatically exits to the DOS prompt after updating BIOS.
- Ensure to load the BIOS default settings to ensure system compatibility and stability. Select the Load Optimized Defaults item under the Exit menu. Refer to section **2.10 Exit menu** for details.
- Ensure to connect all SATA hard disk drives after updating the BIOS file if you have disconnected them.

2.2 BIOS setup program

Use the BIOS Setup program to update the BIOS or configure its parameters. The BIOS screens include navigation keys and brief online help to guide you in using the BIOS Setup program.

Entering BIOS Setup at startup

To enter BIOS Setup at startup:

- Press <Delete> during the Power-On Self Test (POST). If you do not press <Delete>, POST continues with its routines.

Entering BIOS Setup after POST

To enter BIOS Setup after POST:

- Press **<Ctrl>+<Alt>+<Del>** simultaneously.
- Press the reset button on the system chassis.
- Press the power button to turn the system off then back on. Do this option only if you failed to enter BIOS Setup using the first two options.

Using the **power button**, **reset button**, or the **<Ctrl>+<Alt>+<Del>** keys to force reset from a running operating system can cause damage to your data or system. We recommend to always shut down the system properly from the operating system.

- The BIOS setup screens shown in this section are for reference purposes only, and may not exactly match what you see on your screen.
- Ensure that a USB mouse is connected to your motherboard if you want to use the mouse to control the BIOS setup program.
- The default BIOS settings for this motherboard apply for most conditions to ensure optimum performance. If the system becomes unstable after changing any BIOS settings, load the default settings to ensure system compatibility and stability. Select the **Load Optimized Defaults** item under the Exit Menu. See section **2.10 Exit Menu**.
- If the system fails to boot after changing any BIOS setting, try to clear the CMOS and reset the motherboard to the default value. Refer to section **1.6 Jumpers** on how to erase the RTC RAM.
- The BIOS setup program does not support the bluetooth devices.

BIOS menu screen

The BIOS setup program can be used under two modes: **EZ Mode** and **Advanced Mode**. You can change modes from the **Exit** menu or from the **Exit/Advanced Mode** button in the **EZ Mode/Advanced Mode** screen.

EZ Mode

By default, the EZ Mode screen appears when you enter the BIOS setup program. The EZ Mode provides you an overview of the basic system information, and allows you to select the display language, system performance mode and boot device priority. To access the Advanced Mode, click Exit/Advanced Mode, then select Advanced Mode or press F7 for the advanced BIOS settings.

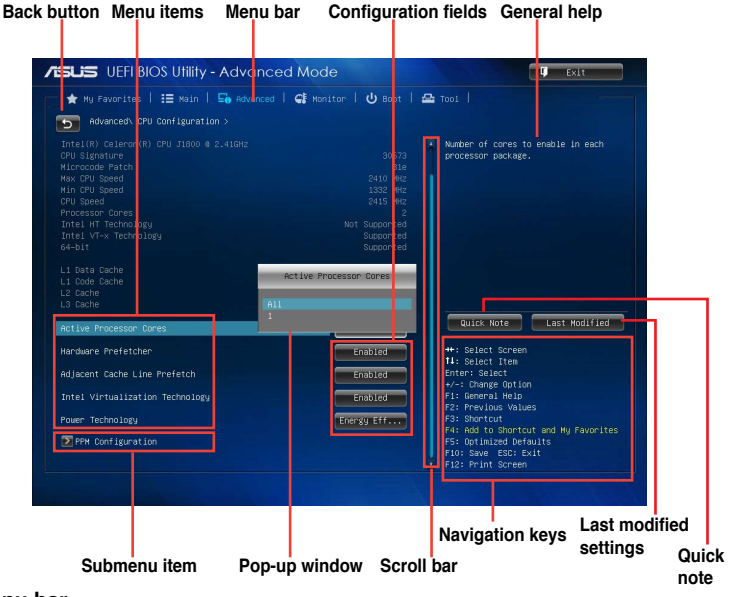
The default screen for entering the BIOS setup program can be changed. Refer to the **Setup Mode** item in section **2.7 Boot menu** for details.

- The boot device options vary depending on the devices you installed to the system.
- The **Boot Menu(F8)** button is available only when the boot device is installed to the system.

Advanced Mode

The Advanced Mode provides advanced options for experienced end-users to configure the BIOS settings. The figure below shows an example of the **Advanced Mode**. Refer to the following sections for the detailed configurations.

To access the EZ Mode, click **Exit**, then select **ASUS EZ Mode.**



Menu bar

The menu bar on top of the screen has the following main items:

My Favorites	For saving the frequently-used system settings and configuration
Main	For changing the basic system configuration
Advanced	For changing the advanced system settings
Monitor	For displaying the system temperature, power status, and changing the fan settings
Boot	For changing the system boot configuration
Tool	For configuring options for special functions
Exit	For selecting the exit options and loading default settings

Menu items

The highlighted item on the menu bar displays the specific items for that menu. For example, selecting **Main** shows the Main menu items.

The other items (Ai Tweaker, Advanced, Monitor, Boot, Tool, and Exit) on the menu bar have their respective menu items.

Back button

This button appears when entering a submenu. Press <Esc> or use the USB mouse to click this button to return to the previous menu screen.

Submenu items

A greater than sign (>) before each item on any menu screen means that the item has a submenu. To display the submenu, select the item and press <Enter>.

Pop-up window

Select a menu item and press <Enter> to display a pop-up window with the configuration options for that item.

Scroll bar

A scroll bar appears on the right side of a menu screen when there are items that do not fit on the screen. Press the Up/Down arrow keys or <Page Up> / <Page Down> keys to display the other items on the screen.

Navigation keys

At the bottom right corner of the menu screen are the navigation keys for the BIOS setup program. Use the navigation keys to select items in the menu and change the settings.

General help

At the top right corner of the menu screen is a brief description of the selected item.

Configuration fields

These fields show the values for the menu items. If an item is user-configurable, you can change the value of the field opposite the item. You cannot select an item that is not user-configurable.

A configurable field is highlighted when selected. To change the value of a field, select it and press <Enter> to display a list of options.

Quick Note button

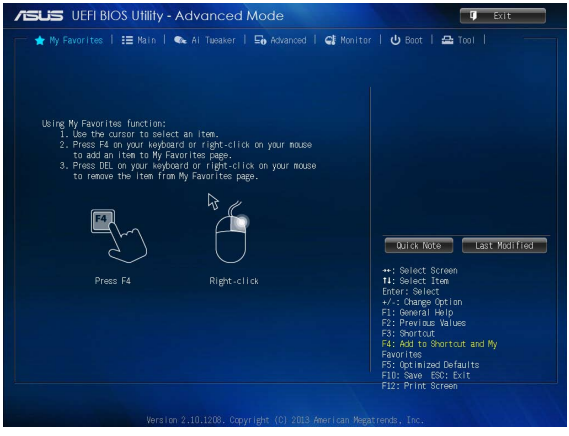
This button allows you to enter notes of the activities that you have done in BIOS.

Last Modified button

This button shows the items that you last modified and saved in BIOS Setup.

2.3 My Favorites

MyFavorites is your personal space where you can easily save and access your favorite BIOS items.



Adding items to My Favorites

To add frequently-used BIOS items to My Favorites:

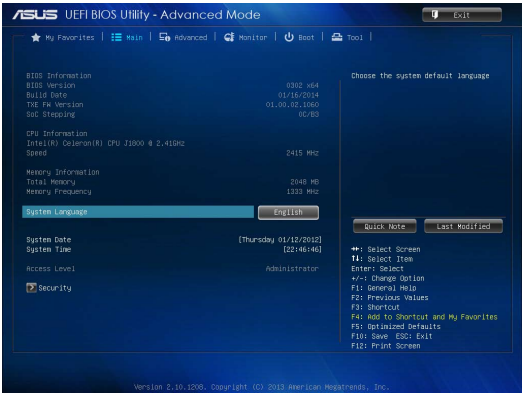
1. Use the arrow keys to select an item that you want to add. When using a mouse, hover the pointer to the item.
2. Press <F4> on your keyboard or right-click on your mouse to add the item to My Favorites page.

You cannot add the following items to My Favorites:

- Items with submenu options
- User-configurable items such as language and boot device order
- Configuration items such as Memory SPD Information, system time and date

2.4 Main menu

The Main menu screen appears when you enter the Advanced Mode of the BIOS Setup program. The Main menu provides you an overview of the basic system information, and allows you to set the system date, time, language, and security settings.



2.4.1 System Language [English]

Allows you to choose the BIOS language version from the options. Configuration options: [English] [Français] [Deutsch] [简体中文] [繁體中文] [日本語] [Español] [Русский] [한국어]

2.4.2 System Date [Day xx/xx/xxxx]

Allows you to set the system date.

2.4.3 System Time [xx:xx:xx]

Allows you to set the system time.

2.4.4 Security

The Security menu items allow you to change the system security settings.

- If you have forgotten your BIOS password, erase the CMOS Real Time Clock (RTC) RAM to clear the BIOS password. See section **1.6 Jumpers** for information on how to erase the RTC RAM.
- The **Administrator** or **User Password** items on top of the screen show the default **Not Installed**. After you set a password, these items show **Installed**.

Administrator Password

If you have set an administrator password, we recommend that you enter the administrator password for accessing the system. Otherwise, you might be able to see or change only selected fields in the BIOS setup program.

To set an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted.

To change an administrator password:

1. Select the **Administrator Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the administrator password, follow the same steps as in changing an administrator password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **Administrator Password** item on top of the screen shows **Not Installed**.

User Password

If you have set a user password, you must enter the user password for accessing the system. The **User Password** item on top of the screen shows the default **Not Installed**. After you set a password, this item shows **Installed**.

To set a user password:

1. Select the **User Password** item and press <Enter>.
2. From the **Create New Password** box, key in a password, then press <Enter>.
3. Confirm the password when prompted.

To change a user password:

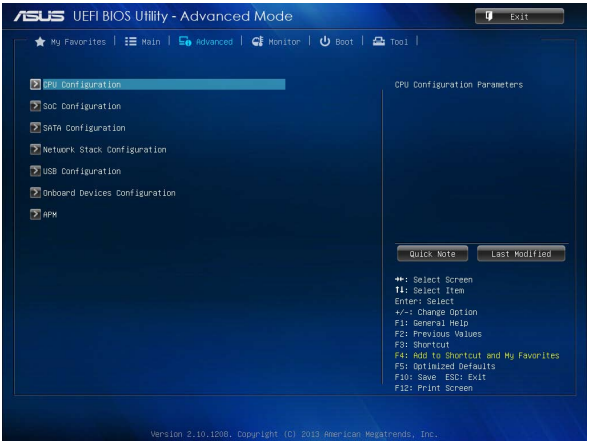
1. Select the **User Password** item and press <Enter>.
2. From the **Enter Current Password** box, key in the current password, then press <Enter>.
3. From the **Create New Password** box, key in a new password, then press <Enter>.
4. Confirm the password when prompted.

To clear the user password, follow the same steps as in changing a user password, but press <Enter> when prompted to create/confirm the password. After you clear the password, the **User Password** item on top of the screen shows **Not Installed**.

2.5 Advanced menu

The Advanced menu items allow you to change the settings for the CPU and other system devices.

Be cautious when changing the settings of the Advanced menu items. Incorrect field values can cause the system to malfunction.



2.5.1 CPU Configuration

The items in this menu show CPU-related information.

Active Processor Cores [All]

Allows you to choose the number of CPU cores to activate in each processor package. Configuration options: [All] [1]

Hardware Prefetcher [Enabled]

[Disabled] Disables this function.

[Enabled] Allows you to turn on /off the Mid Level Cache (L2) streamer prefetcher.

Adjacent Cache Line Prefetch [Enabled]

[Disabled] Disables this function.

[Enabled] Allows a hardware platform to perform adjacent cache line prefetching.

Intel Virtualization Technology [Enabled]

[Enabled] Allows a hardware platform to run multiple operating systems separately and simultaneously, enabling one system to virtually function as several systems.

[Disabled] Disables this function.

Power Technology [Energy Efficient]

[Disable] Disables power management features.

[Energy Efficient] Uses default power management settings.

[Custom] Customize power management.

The following items appear only when you set the Power Technology item to [Custom]

EIST [Enabled]

Allows you to enable or disable Enhanced Intel® SpeedStep Technology (EIST).

[Disabled] The CPU runs at its default speed.

[Enabled] The operating system controls the CPU speed.

Turbo Mode [Enabled]

Allows you to enable or disable Turbo Mode.

[Disabled] Turbo Mode disabled.

[Enabled] Turbo Mode enabled.

P-STATE Coordination [HW_ALL]

Allows you to change P-STATE Coordination type. Configuration options: [HW_ALL] [SW_ALL] [SW_ANY]

CPU C6 Report [Enabled]

Allows you to disable or enable CPU C6 report to OS.

[Disabled] Disables this function.

[Enabled] Enables the C6 report function. This item should be enabled in order to enable the Enhanced Halt State.

CPU C7 Report [Enabled]

Allows you to disable or enable the CPU C7 report to OS.

[Disabled] Disables this function.

[Enabled] Enables the C7 report function. This item should be enabled in order to enable the Enhanced Halt State.

Package C State limit [No limit]

Sets Package C State limits. Configuration options: [C0] [C1] [C3] [C6] [C7] [No limit]

PPM Configuration Parameters

EIST [Enabled]

Allows you to enable or disable Enhanced Intel® SpeedStep Technology (EIST).

[Disabled] The CPU runs at its default speed.

[Enabled] The operating system controls the CPU speed.

CPU C State Report [Enabled]

Allows you to disable or enable CPU C state report to OS.

[Disabled] Disables this function.

[Enabled] Enables C state report.

Enhanced C state [Enabled]

Allows you to disable or enable Enhanced CPU C state.

[Disabled] Disables Enhanced C state.

[Enabled] Enables Enhanced C state.

Max CPU C-state [C7]

Configuration options: [C7] [C6] [C1]

SOix [Disabled]

Allows you to disable or enable CPU SOix state.

[Disabled] Disables this function.

[Enabled] Enables CPU SOix state.

2.5.2 SoC Configuration

Intel IGD Configuration

IGD Turbo Enable [Enabled]

Allows you to enable/disable IGD Turbo. Configuration options: [Enabled] [Disabled]

Primary Display [IGD]

Select which IGD/PCI Graphics device should be used as Primary Display. Configuration options: [Auto] [IGD] [PCI] [SG]

iGPU Memory [Auto]

Allows you to select the amount of system memory allocated to DVMT 5.0 used by the iGPU. Configuration options: [Auto] [64M] [96M] [128M] ~ [480M] [512M]

Memory Configuration

Memory Scrambler [Disabled]

Allows you to enable/disable Memory Scrambler support. Configuration options: [Enabled] [Disabled]

Intel(R) Smart Connect Technology

ISCT Configuration [Disabled]

Allows you to enable or disable the ISCT configuration. Configuration options: [Enabled] [Disabled]

High Precision Timer [Enabled]

Allows you to enable or disable the High Precision Event Timer.

Configuration options: [Enabled] [Disabled]

2.5.3 SATA Configuration

While entering Setup, the BIOS automatically detects the presence of SATA devices. The SATA Port items show **Empty** if no SATA device is installed to the corresponding SATA port.

SATA Mode [AHCI Mode]

Allows you to set the SATA configuration.

[Disabled] Disables the SATA function.

[IDE Mode] Set to [IDE Mode] when you want to use the Serial ATA hard disk drives as Parallel ATA physical storage devices.

[AHCI Mode] Set to [AHCI Mode] when you want the SATA hard disk drives to use the AHCI (Advanced Host Controller Interface). The AHCI allows the onboard storage driver to enable advanced Serial ATA features that increases storage performance on random workloads by allowing the drive to internally optimize the order of commands.

S.M.A.R.T. Status Check [Enabled]

S.M.A.R.T. (Self-Monitoring, Analysis and Reporting Technology) is a monitor system. When read/write of your hard disk errors occur, this feature allows the hard disk to report warning messages during the POST. Configuration options: [Enabled] [Disabled]

Hot Plug [Disabled]

This item only appears when you set the SATA Mode Selection item to [AHCI] and allows you to enable or disable the hot-plug support for each SATA port. Configuration options: [Enabled] [Disabled]

2.5.4 Network Stack Configuration

Network Stack [Disabled]

This item allows user to disable or enable the UEFI network stack. Configuration options: [Disabled] [Enabled]

The following two items appear only when you set the previous item to [Enabled].

Ipv4 PXE Support [Enabled]

This item allows user to disable or enable the Ipv4 PXE Boot support. Configuration options: [Disabled] [Enabled]

Ipv6 PXE Support [Enabled]

This item allows user to disable or enable the Ipv6 PXE Boot support. Configuration options: [Disabled] [Enabled]

2.5.5 USB Configuration

The items in this menu allow you to change USB-related features.

The USB Devices item shows the auto-detected values. If no USB device is detected, the item shows **None**.

XHCI Mode [Enabled]

Allows you to enable or disable the XHCI Mode. Configuration options: [Enabled] [Disabled]

EHCI Hand-off [Disabled]

[Enabled] Enables the support for operating systems without an EHCI hand-off feature.

[Disabled] Disables the function.

USB Per Port Control

USB3_1 / USB2 / USB3 / USB_E1234 [Enabled]

Configuration options: [Enabled] [Disabled]

2.5.6 Onboard Devices Configuration

HD Audio Controller [Enabled]

[Enabled] Enables the High Definition Audio Controller.

[Disabled] Disables the controller.

The following item appears only when you set the **HD Audio Controller** item to [Enabled].

Front Panel Type [HD]

Allows you to set the front panel audio connector (AAFP) mode to legacy AC'97 or high-definition audio depending on the audio standard that the front panel audio module supports.

[HD] Sets the front panel audio connector (AAFP) mode to high definition audio.

[AC97] Sets the front panel audio connector (AAFP) mode to legacy AC'97

Realtek LAN Controller [Enabled]

[Enabled] Enables the Realtek LAN controller.

[Disabled] Disables the controller.

Serial Port 1/2 Configuration

The sub-items in this menu allow you to set the serial port configuration.

Serial Port [Enabled]

Allows you to enable or disable the serial port (COM) 1/2. Configuration options: [Enabled] [Disabled]

Change Settings [IO=3F8h; IRQ=4]

This item appears only when you set the **Serial Port** to [Enabled] and allows you to select the Serial Port base address. Configuration options: [IO=3F8h; IRQ=4] [IO=2F8h; IRQ=3] [IO=3E8h; IRQ=4] [IO=2E8h; IRQ=3]

Parallel Port Configuration

The sub-items in this menu allow you to set the parallel port configuration.

Parallel Port [Enabled]

Allows you to enable or disable the parallel port (LPT/LPTE).
Configuration options: [Enabled] [Disabled]

The following items appear only when you set the **Parallel Port Configuration** item to [Enabled].

Change Settings [Auto]

Allows you to select an optimal setting for Super I/O devices. Configuration options: [Auto] [IO=378h; IRQ=5;] [IO=378h; IRQ=5,6,7,9,10,11,12;] [IO=278h; IRQ=5,6,7,9,10,11,12;] [IO=3BCh; IRQ=5,6,7,9,10,11,12;]

Device Mode [STD Printer Mode]

Allows you to select the Printer Port mode. Configuration options: [STD Printer Mode] [SPP Mode] [EPP-1.9 and SPP Mode] [EPP-1.7 and SPP Mode] [ECP Mode] [ECP and EPP 1.9 Mode] [ECP and EPP 1.7 Mode]

2.5.7 APM

Restore AC Power Loss [Power Off]

[Power On]	The system goes into on state after an AC power loss.
[Power Off]	The system goes into off state after an AC power loss.
[Last State]	The system goes into either off or on state, whatever the system state was before the AC power loss.

Power On By PS/2 Keyboard [Disabled]

[Disabled]	Disables the Power On by a PS/2 keyboard.
[Space Bar]	Sets the Space Bar on the PS/2 keyboard to turn on the system.
[Ctrl-Esc]	Sets the Ctrl+Esc key on the PS/2 keyboard to turn on the system.
[Power Key]	Sets Power key on the PS/2 keyboard to turn on the system. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead.

Power On By PS/2 Mouse [Disabled]

[Disabled]	Disables the Power On by a PS/2 mouse.
[Enabled]	Enables the Power On by a PS/2 mouse. This feature requires an ATX power supply that provides at least 1A on the +5VSB lead.

Power On By PCI-E/PCI [Disabled]

[Disabled] Disables the PCI-E/PCI devices to generate a wake event.

[Enabled] Enables the PCI-E/PCI devices to generate a wake event.

Power On By Ring [Disabled]

[Disabled] Disables Ring to generate a wake event.

[Enabled] Enables Ring to generate a wake event.

Power On By RTC [Disabled]

[Disabled] Disables RTC to generate a wake event.

[Enabled] When set to [Enabled], the items **RTC Alarm Date (Days)** and **Hour/ Minute/Second** will become user-configurable with set values.

RTC Alarm Date (Days)

This item appears only when you set the previous item to [Enabled] and allows you to select RTC alarm time (days). When you set the time to zero, the RTC alarms everyday. Use <+> and <-> keys to adjust the time.

- Hour / - Minute / - Second

Allows you to set the RTC alarm time. Use <+> and <-> keys to adjust the time.

2.6 Monitor menu

The Monitor menu displays the system temperature/power status, and allows you to change the fan settings.

2.6.1 CPU Temperature [xxxºC/xxxºF]

The onboard hardware monitor automatically detects and displays the CPU temperature.

2.6.2 CPU / Chassis Fan Speed [xxxx RPM]

The onboard hardware monitor automatically detects and displays the CPU and chassis fan speeds in rotations per minute (RPM). If the fan is not connected to the motherboard, the field shows **N/A**.

2.6.3 CPU Core Voltage, 3.3V Voltage, 5V Voltage, 12V Voltage

The onboard hardware monitor automatically detects the voltage output through the onboard voltage regulators.

2.6.4 CPU Q-Fan Control [Enabled]

[Disabled] Disables the CPU Q-Fan control feature.

[Enabled] Enables the CPU Q-Fan control feature.

CPU Fan Speed Low Limit [200 RPM]

This item appears only when you enable the **CPU Q-Fan Control** feature and allows you to disable or set the CPU fan warning speed. Configuration options: [Ignore] [100 RPM] [200 RPM] [300 RPM] [400 RPM] [500 RPM]

CPU Fan Profile [Standard]

This item appears only when you enable the **CPU Q-Fan Control** feature and allows you to set the appropriate performance level of the CPU fan.

[Standard] Sets to [Standard] to make the CPU fan automatically adjust depending on the CPU temperature.

[Silent] Sets to [Silent] to minimize the fan speed for quiet CPU fan operation.

[Turbo] Sets to [Turbo] to achieve maximum CPU fan speed.

[Manual] Sets to [Manual] to assign detailed fan speed control parameters.

The following four items appear only when you set **CPU Fan Profile** to [Manual].

CPU Upper Temperature [70]

Use the <+> and <-> keys to adjust the upper limit of the CPU temperature. The values range from 20ºC to 75ºC.

CPU Fan Max. Duty Cycle(%) [100]

Use the <+> and <-> keys to adjust the maximum CPU fan duty cycle. The values range from 20% to 100%. When the CPU temperature reaches the upper limit, the CPU fan will operate at the maximum duty cycle.

CPU Lower Temperature [20]

Use the <+> and <-> keys to adjust the lower limit of the CPU temperature. The values range from 20ºC to 75ºC.

CPU Fan Min. Duty Cycle(%) [20]

Use the <+> and <-> keys to adjust the minimum CPU fan duty cycle. The values range from 20% to 100%. When the CPU temperature is under the lower limit, the CPU fan will operate at the minimum duty cycle.

2.6.5 Chassis Fan Q-Fan Control [Enabled]

[Disabled] Disables the Chassis Q-Fan control feature.

[Enabled] Enables the Chassis Q-Fan control feature.

Chassis Fan Speed Low Limit [600 RPM]

This item appears only when you enable the Chassis Q-Fan Control feature and allows you to disable or set the Chassis fan warning speed. Configuration options: [Ignore] [200 RPM] [300 RPM] [400 RPM] [500 RPM] [600 RPM]

Chassis Fan Profile [Standard]

This item appears only when you enable the Chassis Q-Fan Control feature and allows you to set the appropriate performance level of the Chassis fan.

[Standard] Sets to [Standard] to make the Chassis fan automatically adjust depending on the Chassis temperature.

[Silent] Sets to [Silent] to minimize the fan speed for quiet Chassis fan operation.

[Turbo] Sets to [Turbo] to achieve maximum Chassis fan speed.

[Manual] Sets to [Manual] to assign detailed fan speed control parameters.

The following four items appear only when you set **Chassis Fan Profile** to [Manual].

Chassis Fan Upper Temperature [70]

Use the <+> and <-> keys to adjust the upper limit of the Chassis temperature. The values range from 20ºC to 75ºC.

Chassis Fan Max. Duty Cycle(%) [100]

Use the <+> and <-> keys to adjust the maximum Chassis fan duty cycle. The values range from 20% to 100%. When the Chassis temperature reaches the upper limit, the Chassis fan will operate at the maximum duty cycle.

Chassis Fan Lower Temperature [20]

Displays the lower limit of the Chassis temperature.

Chassis Fan Min. Duty Cycle(%) [20]

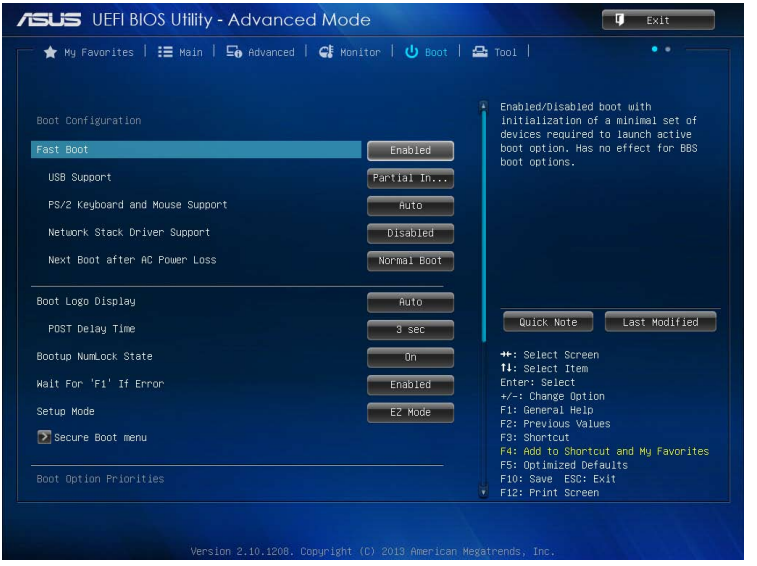
Use the <+> and <-> keys to adjust the minimum Chassis fan duty cycle. The values range from 20% to 100%. When the Chassis temperature is under 40ºC, the Chassis fan will operate at the minimum duty cycle.

Anti Surge Support [Disabled]

This item allows you to enable or disable the Anti Surge function. Configuration options: [Disabled] [Enabled]

2.7 Boot menu

The Boot menu items allow you to change the system boot options.



2.7.1 Fast Boot [Enabled]

[Enabled] Select to accelerate the boot speed.

[Disabled] Select to go back to normal boot.

The following four items appear when you set **Fast Boot** to [Enabled].

USB Support [Partial Initialization]

[Disabled] All USB devices will not be available until OS boot up for a fastest POST time.

[Full Initialization] All USB devices will be available during POST. This process will extend the POST time.

[Partial Initialization] For a faster POST time, only the USB ports with keyboard and mouse connections will be detected.

PS/2 Keyboard and Mouse Support [Auto]

Select any of these settings when PS/2 keyboard and mouse are installed. These settings only apply when Fast Boot is enabled.

[Auto] For a faster POST time, PS/2 devices will only be available when the system boots up or rebooted when the PS/2 devices have not been reconnected or changed. If you disconnect or change PS/2 devices before restarting the system, PS/2 devices will not be available and BIOS setup program will not be accessible via PS/2 devices.

[Full Initialization] For full system control, PS/2 devices will be available during POST at any circumstances. This process will extend POST time.

[Disabled] For the fastest POST time, all PS/2 devices will not be available until your computer enters the operating system.

Network Stack Driver Support [Disabled]

[Disabled] Select to skip the network stack driver from loading during POST.

[Enabled] Select to load the network stack driver during POST.

Next Boot after AC Power Loss [Normal Boot]

[Normal Boot] Returns to normal boot on the next boot after AC power loss.

[Fast Boot] Accelerates the boot speed on the next boot after AC power loss.

2.7.2 Boot Logo Display [Enabled]

Boot Logo Display [Auto]

[Auto] Adjust automatically for Windows® requrement.

[Full Screen] Maximize the boot logo size.

[Disabled] Hide the logo during POST.

POST Delay Time [3 sec]

This item appears only when you set Boot Logo Display to [Enabled]. This item allows you to select the desired additional POST waiting time to easily enter the BIOS setup. You can only execute the POST delay time during Normal Boot. The values range from 0 to 10 seconds.

This feature will only work under normal boot.

Post Report [5 sec]

This item appears only when you set Boot Logo Display to [Disabled]. This item allows you to select a desired post report waiting time. The values range from 1 to 10 seconds.

2.7.3 Bootup NumLock State [On]

[On] Sets the power-on state of the NumLock to [On].

[Off] Sets the power-on state of the NumLock to [Off].

2.7.4 Wait for 'F1' If Error [Enabled]

When this item is set to [Enabled], the system waits for the F1 key to be pressed when error occurs. Configuration options: [Disabled] [Enabled]

2.7.5 Setup Mode [EZ Mode]

[Advanced Mode] Sets Advanced Mode as the default screen for entering the BIOS setup program.

[EZ Mode] Sets EZ Mode as the default screen for entering the BIOS setup program.

2.7.6 Secure Boot menu

Allows you to configure the Windows® Secure Boot settings and manage its keys to protect the system from unauthorized access and malwares during POST.

OS Type [Windows UEFI mode]

Allows you to select your installed operating system.

[Windows UEFI mode] Executes the Microsoft® Secure Boot check. Only select this option when booting on Windows® UEFI mode or other Microsoft® Secure Boot compliant OS.

[Other OS] Get the optimized function when booting on Windows® non-UEFI mode, Windows® Vista/XP, or other Microsoft® Secure Boot non-compliant OS. Only on Windows® UEFI mode that Microsoft® Secure Boot can function properly.

The following item appears when **OS Type** is set to [**Windows UEFI mode**].

Key Management

This item allows you to manage the Secure Boot keys.

Install default Secure Boot keys

This item allows you to install all default Secure Boot keys.

Save Secure Boot keys

This item appears only when you load the default Secure Boot keys. This item allows you to save all default Secure Boot keys.

PK Management

The Platform Key (PK) locks and secures the firmware from any non-permissible changes. The system verifies the PK before your system enters the OS.

Delete PK

Allows you to delete the PK from your system. Once the PK is deleted, all the system's Secure Boot keys will not be active. Configuration options: [Yes] [No]

Load PK from File

Allows you to load the downloaded PK from a USB storage device.

The PK file must be formatted as a UEFI variable structure with time-based authenticated variable.

KEK Management

The KEK (Key-exchange Key or Key Enrollment Key) manages the Signature database (db) and Revoked Signature database (dbx).

Key-exchange Key (KEK) refers to Microsoft® Secure Boot Key-Enrollment Key (KEK).

Delete the KEK

Allows you to delete the KEK from your system. Configuration options: [Yes] [No]

Load KEK from File

Allows you to load the downloaded KEK from a USB storage device.

Append KEK from file

Allows you to load the additional KEK from a storage device for an additional db and dbx loaded management.

The KEK file must be formatted as a UEFI variable structure with time-based authenticated variable.

DB Management

The db (Authorized Signature database) lists the signers or images of UEFI applications, operating system loaders, and UEFI drivers that you can load on the single computer.

Delete the db

Allows you to delete the db file from your system. Configuration options: [Yes] [No]

Load db from File

Allows you to load the downloaded db from a USB storage device.

Append db from file

Allows you to load the additional db from a storage device so that more images can be loaded securely.

The DB file must be formatted as a UEFI variable structure with time-based authenticated variable.

DBX Management

The dbx (Revoked Signature database) lists the forbidden images of db items that are no longer trusted and cannot be loaded.

Delete the DBX

Allows you to delete the DBX file from your system. Configuration options: [Yes] [No]

Load DBX from File

Allows you to load the downloaded DBX from a USB storage device.

Append DBX from file

Allows you to load the additional DBX from a storage device so that more db's images cannot be loaded.

The DBX file must be formatted as a UEFI variable structure with time-based authenticated variable.

2.7.7 Boot Option Priorities

These items specify the boot device priority sequence from the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system.

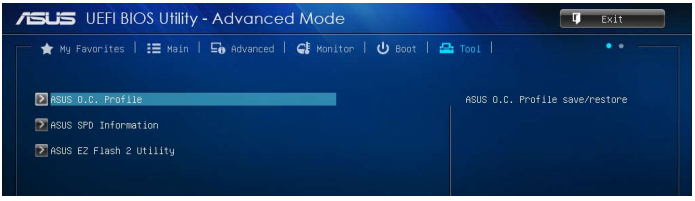
- To select the boot device during system startup, press <F8> when ASUS Logo appears.
- To access Windows OS in Safe Mode, press <F8> after POST.

2.7.8 Boot Override

These items displays the available devices. The number of device items that appears on the screen depends on the number of devices installed in the system. Click an item to start booting from the selected device.

2.8 Tools menu

The Tools menu items allow you to configure options for special functions. Select an item then press <Enter> to display the submenu.



2.8.1 ASUS O.C. Profile

This item allows you to store or load multiple BIOS settings.

The **Setup Profile Status** items show **Not Installed** if no profile is created.

Label

Allows you to input the label of the setup profile.

Save to Profile

Allows you to save the current BIOS settings to the BIOS Flash, and create a profile. Key in a profile number from one to eight, press <Enter>, and then select **Yes**.

Load from Profile

Allows you to load the previous BIOS settings saved in the BIOS Flash. Key in the profile number that saved your CMOS settings, press <Enter>, and then select **Yes**.

- DO NOT shut down or reset the system while updating the BIOS to prevent the system boot failure!
- We recommend that you update the BIOS file only coming from the same memory/ CPU configuration and BIOS version.

Load/Save CMOS Profile From/to USB drive

Allows you to load/save a CMOS profile from/to a USB drive. Press <Enter>, and then press **F2** to save or **Enter** to load.

2.8.2 ASUS SPD Information

DIMM Slot # [DIMM_A1]

Displays the Serial Presence Detect (SPD) information of the DIMM module installed on the selected slot. Configuration options: [DIMM_A1] [DIMM_B1]

2.8.3 ASUS EZ Flash 2 Utility

Allows you to run ASUS EZ Flash 2. Press [Enter] to launch the ASUS EZ Flash 2 screen.

For more details, see section **2.1.2 ASUS EZ Flash 2**.

2.9 Exit menu

The Exit menu items allow you to load the optimal default values for the BIOS items, and save or discard your changes to the BIOS items. You can access the **EZ Mode** from the Exit menu.

Load Optimized Defaults

This option allows you to load the default values for each of the parameters on the Setup menus. When you select this option or if you press <F5>, a confirmation window appears. Select **Yes** to load the default values.

Save Changes & Reset

Once you are finished making your selections, choose this option from the Exit menu to ensure the values you selected are saved. When you select this option or if you press <F10>, a confirmation window appears. Select **Yes** to save changes and exit.

Discard Changes & Exit

This option allows you to exit the Setup program without saving your changes. When you select this option or if you press <Esc>, a confirmation window appears. Select **Yes** to discard changes and exit.

ASUS EZ Mode

This option allows you to enter the EZ Mode screen.

Launch EFI Shell from filesystem device

This option allows you to attempt to launch the UEFI Shell application (shellx64.efi) from one of the available devices that have a filesystem.

Appendices

Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with manufacturer's instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IC: Canadian Compliance Statement

Complies with the Canadian ICES-003 Class B specifications. This device complies with RSS 210 of Industry Canada. This Class B device meets all the requirements of the Canadian interference-causing equipment regulations.

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cut appareil numérique de la Classe B est conforme à la norme NMB-003 du Canada. Cet appareil numérique de la Classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Cet appareil est conforme aux normes CNR exemptes de licence d'Industrie Canada. Le fonctionnement est soumis aux deux conditions suivantes :

(1) cet appareil ne doit pas provoquer d'interférences et

(2) cet appareil doit accepter toute interférence, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

VCCI: Japan Compliance Statement

VCCI Class B Statement

情報処理装置等電波障害自主規制について
この装置は、情報処理装置等電波障害自主規制協議会（VCCI）の基準に基づくクラスB情報技術装置です。この装置は家庭環境で使用されることを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

KC: Korea Warning Statement

B급 기기 (가정용 방송통신기자재)
이 기기는 가정용(B급) 전자파적합기기로서 주로 가정에서 사용하는 것을 목적으로 하며, 모든 지역에서 사용할 수 있습니다.

*당해 무선설비는 전파혼신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다.

REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://csr.asus.com/english/REACH.htm.

DO NOT throw the motherboard in municipal waste. This product has been designed to enable proper reuse of parts and recycling. This symbol of the crossed out wheeled bin indicates that the product (electrical and electronic equipment) should not be placed in municipal waste. Check local regulations for disposal of electronic products.

DO NOT throw the mercury-containing button cell battery in municipal waste. This symbol of the crossed out wheeled bin indicates that the battery should not be placed in municipal waste.

ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components as well as the packaging materials. Please go to http://csr.asus.com/english/Takeback.htm for detailed recycling information in different regions.

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Technical Support

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Support Fax	+49-2102-959911
Online support	http://support.asus.com/techserv/techserv.aspx

DECLARATION OF CONFORMITY

Per FCC Part 2 Section 2. 1077(a)

Responsible Party Name: **Asus Computer International**

Address: **800 Corporate Way, Fremont, CA 94539.**

Phone/Fax No: **(510)739-3777/(510)608-4555**

hereby declares that the product

Product Name : Motherboard

Model Number : J1800I-C/BR

Conforms to the following specifications:

☒ FCC Part 15, Subpart B, Unintentional Radiators

Supplementary Information:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Representative Person's Name : **Steve Chang / President**

Signature :

Date : **Jan. 08, 2014**

Ver. 120601

EC Declaration of Conformity

We, the undersigned,

Manufacturer:	ASUSTeK COMPUTER INC.
Address, City:	4F, No. 150, LI-TE Rd., PEITOU, TAIPEI 112, TAIWAN
Country:	TAIWAN
Authorized representative in Europe:	ASUS COMPUTER GmbH
Address, City:	HARKORT STR. 21-23, 40880 RATINGEN
Country:	GERMANY

declare the following apparatus:

Product name :	**Motherboard**
Model name :	**J1800I-C/BR**

conform with the essential requirements of the following directives:

☒2004/108/EC-EMC Directive

☒ EN 55022:2010+AC:2011	☒ EN 55024:2010
☒ EN 61000-3-2:2006+A2:2009	☒ EN 61000-3-3:2008
☐ EN 55013:2001+A1:2003+A2:2006	☐ EN 55020:2007+A11:2011

☐1999/5/EC-R & TTE Directive

☐ EN 300 328 V1.7.1(2006-10)	☐ EN 301 489-1 V1.9.2(2011-09)
☐ EN 300 440-1 V1.6.1(2010-08)	☐ EN 301 489-3 V1.4.1(2002-08)
☐ EN 300 440-2 V1.4.1(2010-08)	☐ EN 301 489-4 V1.4.1(2009-05)
☐ EN 301 511 V9.0.2(2003-03)	☐ EN 301 489-7 V1.3.1(2005-11)
☐ EN 301 908-1 V5.2.1(2011-05)	☐ EN 301 489-9 V1.4.1(2007-11)
☐ EN 301 908-2 V5.2.1(2011-07)	☐ EN 301 489-17 V2.2.1(2012-09)
☐ EN 301 893 V1.6.1(2011-11)	☐ EN 301 489-24 V1.5.1(2010-09)
☐ EN 302 544-2 V1.1.1(2009-01)	☐ EN 302 326-2 V1.2.2(2007-06)
☐ EN 302 623 V1.1.1(2009-01)	☐ EN 302 326-3 V1.3.1(2007-09)
☐ EN 50360:2001	☐ EN 301 357-2 V1.4.1(2008-11)
☐ EN 62479:2010	☐ EN 302 291-1 V1.1.1(2005-07)
☐ EN 50385:2002	☐ EN 302 291-2 V1.1.1(2005-07)
☐ EN 62311:2008	

☒2006/95/EC-LVD Directive

☒ EN 60950-1 / A12:2011	☐ EN 60065:2002 / A12:2011

☐2009/125/EC-ErP Directive

☐ Regulation (EC) No. 1275/2008	☐ Regulation (EC) No. 278/2009
☐ Regulation (EC) No. 642/2009	☐ Regulation (EC) No. 617/2013

☒2011/65/EU-RoHS Directive

Ver. 130816

☒CE marking

(EC conformity marking)

Position : **CEO**

Name : **Jerry Shen**

Signature : _____

Declaration Date: 08/01/2014

Year to begin affixing CE marking: 2014